Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

FCC 96-193

In the Matter of	)	
	)	
Amendment of the Commission's Rules	)	ET Docket No.96-102
to Provide for Unlicensed NII/SUPERNet	)	RM-8648
Operations in the 5 GHz Frequency Range	)	RM-8653

COMMENTS OF MULCAY CONSULTING ASSOCIATES

Pursuant to Section 1.405 of the Commissions Rules and Regulations, Mulcay Consulting Associates (MCA) respectfully submits an original and nine copies of Comments in response to the Notice of Proposed Rulemaking (NPRM) in the above referenced proceeding.

1. MCA's INTEREST

MCA is a consulting company with many years of experience in the design, development, operation and marketing of microwave communications equipment and systems. MCA is interested in supporting changes in regulations that promote competition through technological innovation.

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2. PROPOSED GENERAL TECHNICAL REQUIREMENTS DO NOT SUPPORT THE SERVICE GOALS FOR NII/SUPERNET DEVICES

2.1 Two stated service goals for NII/SUPERNet devices are:

i. Facilitate wireless access to the National Information Infrastructure ("NII"),

ii. To promote the ability of U.S. manufacturers to compete globally (by encouraging the development of devices compatible with the HIPERLAN standard).

2.2 NII/SUPERNet devices service a wide variety of market needs requiring quite different technical parameters. For example, wireless LANs and other mobile devices will operate over limited distances using omnidirectional antennas. On the other hand, wireless access devices will have to communicate over distances in excess of 10 km and will use narrow beam directional antennas. The proposed EIRP limit of -10 dBW (to limit the operating range to 50-100 meters) is not consistent with the Commission's stated diverse service goals.

2.2 Limiting the antenna height for NII/SUPERNet devices used for "Access" would be counter productive. If the antenna height was limited to 15 meters, there would be many cases where line of sight to the access point would be blocked. This would force the operator to either use a non-NII/SUPERNet solution or to use costly NII/SUPERNet repeaters.

2.3 The proposed EIRP limit of -10 dBW, is not compatible with the HIPERLAN standard of 0 dBW.

3. NO CONSIDERATION IS GIVEN TO RADIATION FROM NON-COMMUNICATIONS EQUIPMENT OPERATING IN THE 5.8 GHZ ISM BAND

3.1 Non-communication ISM devices, operating in the 5.8 GHz band under Part 18 of the Rules, are allowed "unlimited" radiation with no in-band spectrum occupancy restrictions. The proposed parameters for communications equipment must consider these factors.

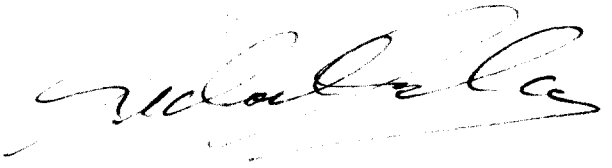
4. SUGGESTED CHANGES TO THE PROPOSED GENERAL TECHNICAL REQUIREMENTS

4.1 Limit the maximum transmitter output power to 1 Watt. This change would mean that devices using omnidirectional antennas (with a gain of 0 dBi) would be compatible with the HIPERLAN standard of 0 dBW. NII/SUPERNet devices used for "Access" would have sufficient power (through the use of narrow beam antennas) to overcome background radiation from ISM equipment and or path losses associated with long paths. The higher level of EIRP, resulting from the use of narrow beam antennas, would not be in conflict with the HIPERLAN standard because "access" is not a HIPERLAN service requirement and the 5.8 GHz band is not a HIPERLAN band.

4.2 Remove the height restriction for NII/SUPERNet devices using narrow beam antennas.

4.3 Remove the spectrum etiquette requirement for NII/SUPERNet devices operating in the 5.8 GHz ISM band. This suggestion is made for two reasons: (1) there is little point in imposing an etiquette on communications devices when the most likely interference will be from ISM devices with no imposed etiquette, (2) devices used for "access" should be protocol transparent.

Respectfully submitted



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